IN THE CLAIMS:

All pending claims are reproduced below.

1. (Currently Amended) A ~~computer-implemented~~ method for secure encoding of datasets for transmission from a sender to a receiver, the method implemented by a computer having a processor, the method comprising:

constructing a template based on one of a plurality of datasets selected for transmission by the sender to the receiver, the selected dataset comprising a plurality of data elements to be encoded that are a subset of the selected dataset, each data element being represented by at least one element reference in the template and each element reference defining at least one aspect of the encoding of the data element using the template, and wherein at least one of the element references specifies including a check digit along with an encoded form of its corresponding data element;

encoding each data element according to its corresponding element reference in the template; and

generating an encoded data representation of the dataset in a textual and compact manner by arranging the encoded data elements in an order specified by the template for secure transmission to the receiver.

2. (Canceled)

3. (Previously Presented) The method of claim 1 wherein the element references are spaced apart by one or more literal elements.

4-18. (Canceled)

19. (Previously Presented) The method of claim 1, wherein the aspect of the encoding of the data element defined by the element reference associated with the data element includes at least one of an encoding set, an encoding length, an encoding element and one or more encoding encryption flags.

20. (Previously Presented) The method of claim 19, wherein the aspect is an encoding set, and the encoding set is a set of encoding characters for the template that represent characters of a given data element.

21. (Previously Presented) The method of claim 20, wherein the set of encoding characters include designated encoding characters for representing characters of the data element selected from the group consisting of: decimal digits, hexadecimal digits, selected alphanumeric characters, and upper case letters.

22. (Previously Presented) The method of claim 19, wherein the aspect is an encoding length, and the encoding length is one or more encoding characters for the template that represent the actual number of characters of a given data element.

23. (Previously Presented) The method of claim 19, wherein the aspect is an encoding element, and the encoding element is a checksum element.

24. (Previously Presented) The method of claim 19, wherein the aspect is an encoding encryption flag, and the encoding encryption flag specifies including a check digit for each data element.

25. (Previously Presented) The method of claim 19, wherein the aspect is an encoding encryption flag, and the encoding encryption flag specifies scrambling of a given data element prior to encoding the element.

26. (Previously Presented) The method of claim 1, further comprising decoding the encoded data according to the constructed template.

27. (Previously Presented) The method of claim 1, wherein the selected dataset is for a product activation application, and at least one of the data elements to be encoded is a serial number.

28. (Previously Presented) The method of claim 1, wherein the selected dataset is for an itemized shopping list application, and at least one of the data elements to be encoded is an item number.

29. (Previously Presented) The method of claim 1, wherein the selected dataset is for a financial transactions application, and at least one of the data elements to be encoded is an account number.

30. (Previously Presented) The method of claim 1, wherein the encoded data representation is reduced in size by the use of large numerical bases.

31. (Previously Presented) The method of claim 1, wherein the data element has an original numeric base and the data element in the encoded data representation is represented in a numerical base that is different from the original numeric base.

32. (Previously Presented) The method of claim 1, further comprising securely transmitting the encoded data representation from the sender to the receiver.